



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,365	05/15/2006	Min-won Kim	1203-105	2990
24106	7590	12/17/2009	EXAMINER	
EGBERT LAW OFFICES			MELLON, DAVID C	
412 MAIN STREET, 7TH FLOOR			ART UNIT	PAPER NUMBER
HOUSTON, TX 77002			1797	
			MAIL DATE	DELIVERY MODE
			12/17/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,365	KIM, MIN-WON	
	Examiner	Art Unit	
	DAVID C. MELLON	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 06 October 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 5 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 5 and 6 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Response to Amendment

1. Claims 5 and 6 are pending, previously presented claims 1-4 now stand as cancelled.

Claim Interpretation

2. Regarding the limitation “said hollow cylindrical protuberance suitable for allowing fluid to flow therethrough from said inlet port to said guide passage”, it is not clear to the Examiner whether it is intended that the same pass way that the guide rod 310 passes is intended for the fluid passage or if it is intended that fluid passes around the exterior of the hollow cylindrical protuberance. If the former is the intended interpretation, the drawings should be reflective of this feature of sufficient passageway space.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. **Claims 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Regarding claim 5, the language “said fluid flow interrupter having an opening and closing projection formed adjacent an opposite end thereof” renders the claim indefinite because it fails to disclose where the physical element is with regards to the other elements. Is it floating in space? Is it next to the opening/closing body?

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horne (USP 3,319,791) in view of Van Scyoc et al. (USP 6,354,564) and in view of Hansen (USP 2,823,048).**

Regarding claim 5, Horne discloses in figures 1-3 (see also annotated figures), a poppet valve and container combination (title) comprising:

a head (5) having a guide passage (passage between inlet 37 and conduit 24, see also internal space around the valve assembly) and an inlet port (37) and an outlet port (38), said guide passage suitable for guiding fluid into said head through said inlet port, said outlet port suitable for discharging purified fluid from said head;

a filter body (6, see also C1/L60-C2/L25 where clearly the container is intended as a filter by internal components discussed) threadedly locked to said head (threading

Art Unit: 1797

28 and 32 connects the components together), said filter body in fluid communication with said guide passage and said inlet port and said outlet port so as to receive fluid from said guide passage and said inlet port and to transfer purified fluid to said outlet port; and

a fluid flow interrupting means disposed in said guide passage (poppet valve component including pilot end 56, also 29, 44 and other parts), said fluid flow interrupting means having:

a fluid guide rod formed at one end thereof (56),

an opening and a closing body connected at one end thereof to said fluid guide rod (see annotated figure 2),

said opening and closing body having a gradually decreasing diameter (see tapered internal diameter part) with an O-ring fitted therearound adjacent one end thereof (o-ring 44) and an opening and closing projection formed adjacent an opposite end thereof (see aspect below o-ring),

an elastic spring cooperative with said guide passage for controllably opening and closing said guide passage by force of said elastic spring when said head and said filter body are coupled and uncoupled from each other (50, C2/L52-70),

said filter body having at least one through hole defined at an upper end thereof so as to allow fluid from said guide passage and said inlet port to flow into said filter body (conduit 24),

said guide passage having a hollow cylindrical protuberance formed at one end thereof (55 - central bore), said hollow cylindrical protuberance having an inner diameter greater than an outer diameter of said fluid guide rod (this is clearly shown in the figure),

said guide passage having a gradually decreasing inner diameter at an opposite end thereof (see decreasing diameter of beveled valve seat 48), said fluid guide rod inserted through one end of said elastic spring (clearly fluid guide rod is through the spring), said elastic spring having another end fitted around said hollow cylindrical protuberance (spring 50 is in groove 51 around 55), said fluid guide rod suitable for guiding fluid therearound (fluid would be guided around rod 56), said elastic spring being supported by said hollow cylindrical protuberance (55 has groove 51 in a portion of it).

Horne fails to explicitly disclose the exact details of the claimed valve assembly or fluid flow interrupting means and fails to disclose a direct inline valve assembly.

Van Scyoc discloses an inline valve assembly (abstract) in figure one which opens when an element is plugged in (this element can be anything made compatible) comprising:

A fluid flow interrupter (right side assembly portion of figure 1) comprising:

A fluid guide rod (30) having an opening and closing body connected to it (26), said opening/closing body having a gradually decreasing diameter (see shown in figure), said fluid flow interrupter having an o-ring fitted around the opening/closing body (58), said fluid flow interrupter having an opening/closing projection formed adjacent an opposite end thereof (The Examiner believes this could be interpreted to be the element

Art Unit: 1797

that o-ring 58 sits seals against when the valve is actuated shut), said fluid flow interrupter having an elastic spring positioned within said guide passage suitable for controllably opening and closing said guide passage by force of the spring when the unit is uncoupled (spring is clearly shown in figure 1 but is not numbered - see spiral/coil element), said fluid guide rod inserted through one end of the spring (clearly shown in figure 1, spring biases against open/close member and spring has guide rod 30 passed through it), said fluid flow interrupter having a hollow cylindrical protuberance formed at one end of the guide passage (34), said elastic spring is fit around this protuberance (clearly shown in figure 1), the protuberance allows the guide rod (30) to pass through it thus having a larger diameter than the outer diameter of the guide rod (30 - see figures), said guide passage having a gradually decreasing diameter at an opposite end thereof (diameter decreases at the point where the valve member seals the hole).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the filter unit of Horne by replacing the valve assembly with that of Van Sycoc for the purpose of providing an art known valve into a fluid system that utilizes coupling so as to provide for an improved inlet fluid control system as well as to provide an inline valve system.

Modified Horne does not explicitly disclose fluid flow around the guide rod through the protuberance.

Hansen discloses a guide rod with protuberance assembly in figures 1-6 wherein the protuberance is slightly larger in diameter than the guide rod (C2/L50-72).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the protuberance to allow for fluid flow as taught by Hansen for the purpose of allowing for additional fluid flow through the protuberance in addition to through the allowed passages of the Van Sycoc valve.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horne (USP 3,319,791) in view of Van Scyoc et al. (USP 6,354,564) in view of Hansen (USP 2,823,048) and further in view of Nam et al. (US 2003/0042191)..

Regarding claim 6, Horne discloses all of the claim limitations as set forth above. Horne is silent as to a mounting bracket system.

Nam et al. discloses a manifold for a replaceable fluid filter cartridge (Abstract) and in figure 1 shows a fixing unit (130) which attaches to circular plate (137) of the manifold and is then used to attach the device to a wall ([0043]).

Horne and Nam et al. are combinable because they are both concerned with the same field of endeavor, namely that of water filter devices.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the water filter apparatus of Horne to include a mounting bracket to hold the head or manifold aspect of a filter unit to a wall as taught by Nam et al. for the purpose of allowing for the filter device to be securely installed into a location for usage.

Response to Arguments

9. Applicant's arguments with respect to claims 5-6 have been considered but are moot in view of the new ground(s) of rejection.

The new rejection combination of references provides over the listed deficiencies of the Horne reference alone.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID C. MELLON whose telephone number is (571)270-7074. The examiner can normally be reached on Monday through Thursday 9:00am-5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tony G Soohoo/
Primary Examiner, Art Unit 1797

/D. C. M./
Examiner, Art Unit 1797